

Joint Utility (JU) Interconnection Technical Working Group (ITWG) Energy Storage Roadmap Items for Discussion (Business Confidential Draft)

On June 21, 2018, the Department of Public Service (DPS) Staff and the New York State Energy Research and Development Authority filed their Energy Storage Roadmap¹. Based on the recommended actions indicated on page 55 of the Roadmap, the Utility participants JU ITWG have developed an initial list of technical items that require further discussion and coordination regarding energy storage interconnection in New York. The ITWG expects to further refine this list over time as discussions continue and the Interconnection Policy Working Group (JU IPWG) perspective is also considered.

- **SIR Templates**
 - Development of a standardized interconnection agreement template for energy storage system (ESS) operating characteristics (Attachment 1 of Appendix A of the New York State Standardized Interconnection Requirements (SIR))
 - Development of a standardized application form for ESS application requirements, operating characteristics and market participation (Appendix K of the SIR).
- **Hosting Capacity**
 - Coordination with stakeholders regarding the Hosting Capacity roadmap and use cases for energy storage
- **Monitoring and Control Mechanisms**
 - Ability to ensure systems are operating as per the standardized interconnection agreement (Attachment 1 of Appendix A of the SIR) and cannot be easily changed to a new operating mode (i.e. standalone vs. parallel mode)
- **Metering Requirements**
 - Ability to support required tariffs
 - Development of requirements for installation
- **Market Considerations**
 - Understanding of capabilities and requirements such as frequency regulation markets – maximum and frequency of power output changes
 - Insight into ramp rate requirements
 - Determination of how to balance economic and reliability needs between NYISO and TOs
- **Technology**
 - Relay and control scheme requirements
 - Formation of requirements of primary and backup control systems
 - Developer education of technology available to meet utility needs for control mechanisms and primary/backup systems

¹ Case 18-E-0130, In the Matter of Energy Storage Deployment Program, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued June 21, 2018) (“Energy Storage Roadmap”), p. 55.

- Improved understanding of how technologies operate based on manufacturer propriety information
- Voltage control via smart inverters
 - i.e. monitoring and control to maintain voltage at the service point within ANSI C84.1 limitations
- **Data Availability**
 - How to manage 8760 analysis
 - How to coordinate with interconnected storage already served by a particular feeder/substation given unique operating characteristics of each facility
- **Technical Review**
 - Modeling challenges/limitations to be considered
 - Increase in the number of scenarios studied as operating characteristics proposed evolve during discussion
 - Expected increase in time and need for restudies when developers submit application with uncertainty regarding operating schedules
 - Fast tracking of specific ESS application types to be reviewed
 - Reverse power relaying limitations
 - Load threshold for behind the meter applications
 - Local municipality interconnection requirement impacts (e.g. Energy Storage System Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems)
 - ESS paired with other Distributed Generation